

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)						DATE MAY 2009																																				
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7			R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160477BB SOF Weapon Systems/S375																																							
COST (Dollars in Millions)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	Cost to Complete	Total Cost																																
PE1160477B		3.952	1.081						Cont.	Cont.																																
S375 SOF Weapon Systems		3.952	1.081						Cont.	Cont.																																
<p>A. Mission Description and Budget Item Justification: This program element provides for development, testing, and integration of specialized weapon systems and weapon accessories to meet the unique requirements of Special Operations Forces (SOF). This specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.</p> <p>B. Program Change Summary:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY08</u></th> <th style="text-align: center;"><u>FY09</u></th> <th style="text-align: center;"><u>FY10</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget</td> <td></td> <td style="text-align: center;">2.759</td> <td style="text-align: center;">1.290</td> </tr> <tr> <td>Current President's Budget</td> <td></td> <td style="text-align: center;">3.952</td> <td style="text-align: center;">1.081</td> </tr> <tr> <td>Total Adjustments</td> <td></td> <td style="text-align: center;">1.193</td> <td style="text-align: center;">-0.209</td> </tr> <tr> <td> Congressional Program Reductions</td> <td></td> <td style="text-align: center;">-0.207</td> <td></td> </tr> <tr> <td> Congressional Increases</td> <td></td> <td style="text-align: center;">1.400</td> <td></td> </tr> <tr> <td> Reprogrammings</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Other Program Adjustments</td> <td></td> <td></td> <td style="text-align: center;">-0.209</td> </tr> </tbody> </table>												<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	Previous President's Budget		2.759	1.290	Current President's Budget		3.952	1.081	Total Adjustments		1.193	-0.209	Congressional Program Reductions		-0.207		Congressional Increases		1.400		Reprogrammings				Other Program Adjustments			-0.209
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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE MAY 2009
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160477BB SOF Weapon Systems/S375	
<p>Funding:</p> <p>FY09: Net increase of \$1.193 million is due to a Congressional add for Weapons Shot Counter (\$1.400 million), a Congressional mark for Combat Assault Rifle (-\$0.200 million), and Congressional reduction for Section 8101 (-\$0.007 million).</p> <p>FY10: Net decrease of -\$0.209 million is due to realignment for higher command priorities (-\$0.194 million) and a decrease for economic assumptions (-\$0.015 million).</p> <p>Schedule: None.</p> <p>Technical: None.</p>		

Exhibit R-2a, RDT&E Project Justification		Date: MAY 2009
Appropriation/Budget Activity RDT&E, DEFENSE-WIDE / 7	SOF Weapons Systems / Project S375	

Cost (\$ in millions)	FY08*	FY09	FY10	FY11	FY12	FY13	FY14	FY15
SOF Weapons Systems	15.394	3.952	1.081					
RDT&E Articles Quantity								

****FY2008 funds are in Program Element 1160404BB.***

A. Mission Description and Budget Item Justification: This project provides for development and testing of specialized, lightweight individual weapons, fire control/surveillance devices, and combat equipment to meet the unique requirements of Special Operations Forces (SOF). SOF often deploy as small, independent, quick reaction, foot-mobile teams independent of primary logistics support. Existing weapons and combat equipment are frequently unsuited to these conditions. Sub-projects include:

- Sniper weapon systems include next generation system development and pre-planned product improvements to current sniper systems. Next-generation systems include two variants: a precision sniper rifle intended to provide SOF with a highly accurate weapon system capable of engaging targets at 1500 meters or more and an anti-materiel rifle that will pursue heavy sniper system technology to provide SOF with precision engagement capabilities on materiel targets.
- The weapons accessories effort enhances all SOF weapons, both individual and crew served, by leveraging the latest technological advances in optional accessories (up to 30 different functions/capabilities) such as day scopes, night scopes, active aiming laser module, visible lights, grenade launchers, suppressors, hand grips, and close quarters battle sights. These accessories greatly improve the combat effectiveness of the weapon systems and the survivability of the SOF operator. This program was increased by FY 2004, FY 2005, FY 2006, and FY 2007 Congressional adds.
- The binocular/monocular program is developing the next generation night vision goggle. This goggle incorporates a fused capability that includes both image intensification and thermal imagery spectrums. This capability allows the SOF operator to conduct missions in the full spectrum of ambient light levels. Funding moved to PE 1160479BB/Project S395 beginning in FY 2009.
- The precision laser targeting device is a hand-held laser range finder and targeting device with an embedded global positioning system to provide the SOF operator with the ability to direct close air support missions by determining the geo-location of a target to support the delivery of GPS-guided munitions. Funding moved to PE 1160479BB/Project S395 beginning in FY 2009.
- The combat assault rifle program will provide the SOF operator with a 5.56 mm light and a 7.62mm heavy family of rifles that are

Exhibit R-2a, RDT&E Project Justification

Date: MAY 2009

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SOF Weapons Systems / Project S375

modular in barrel length. Variants will replace a percentage of assault rifles and light sniper weapons currently in the SOF inventory. Developmental efforts include development, test and evaluation of the sniper support rifle, objective “common upper receiver” design of the combat assault rifle, and full ballistic fire control system for the 40mm enhanced grenade launcher module. The sniper support rifle is the next generation sniper support weapon system. The “common upper receiver” will be capable of accepting 5.56mm, 7.62mm, or any additional caliber ammunition developed. The enhanced grenade launcher fire control unit will provide a precision ballistic solution for current inventory and enhanced 40mm ammunition. Enhanced ammunition will be developed. This program funding was increased by an FY 2007 Congressional add.

- The personal equipment advanced requirements program develops and acquires items that provide SOF personnel required protection from natural threats (environmental, terrain, etc.), enemy threats (ballistics, laser, blunt trauma, etc.), and survival items that allow them to perform at the required level to meet SOF missions. Kits includes 1) ballistic armor, ballistic armor carriers, helmets, and eye protection; 2) cold weather, modular glove system, maritime and other protective clothing; 3) communication headsets and equipment; 4) load carriage and backpack systems; 5) visual augmentation system mounts; and 6) other systems that address SOF operator deficiencies with regard to survival and mission execution in all terrains, climates and environments worldwide. Funding moved to PE 1160478BB/Proj S385 beginning in FY 2009.
- The tactical combat casualty care equipment kit is a technology transfer initiative to identify a variety of medical items and equipment approved by the Food and Drug Administration to include intraosseous infusion devices, patient monitoring and assessment devices, emergency airway kits, and devices that support patient management and enroute care capabilities for the far-forward treatment of SOF casualties in remote and austere environments. Two kits will provide a unit-level combat casualty care capability to users at the operator and medic levels to aid in rapid response. The casualty evacuation kit will provide group-level casualty evacuation capability to enable groups to access, rescue, transport, and sustain injured from point of injury through to a point where definitive care can be provided. Funding moved to PE 1160478BB/Project S385 beginning in FY 2009.
- Weapons Shot Counter. This was an FY 2009 Congressional add to develop a device to track rounds fired to establish reliability and maintainability data on weapons life. This device will provide the unit armorer a means to track the number of rounds fired and anticipate the need for maintenance and repair prior to firearms failure, ultimately minimizing or eliminating parts failures and malfunctions in combat.
- Multi-User Panoramic Synthetic Vision System. This initiative was an FY 2008 Congressional add to integrate and evaluate visual

Exhibit R-2a, RDT&E Project Justification		Date: MAY 2009
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augmentation systems and sensors on ground vehicles. Supports development of enhancements for perimeter protection and situational awareness.

B. Accomplishments/Planned Program

	FY08	FY09	FY10	FY11
Sniper Weapon Systems	.487	.496		
RDT&E Articles Quantity				
FY08 Pursued the next generation medium sniper system capability. Conducted market research, industry conferences, and developmental testing. FY09 Conduct both developmental and operational testing on medium and heavy sniper system capabilities.				
	FY08	FY09	FY10	FY11
Weapons Accessories	.499	.261	.250	
RDT&E Articles Quantity				
FY08 Pursued fused image clip-on device through market research, industry conference, and solicitation. FY09 Conduct user assessments, test and evaluation and source selection of clip on night vision device-fused, and begin efforts on muzzle brake suppressors. FY10 Conducts market research and assessments for crew-served weapon capabilities.				
	FY08	FY09	FY10	FY11
Binocular/Modular Systems	1.463			
RDT&E Articles Quantity				
FY08 Developed an advanced night vision goggle system (i.e., sensor fusion), increasing the capabilities of the existing goggles.				
	FY08	FY09	FY10	FY11
Laser Targeting Device	8.682			
RDT&E Articles Quantity				
FY08 Continued weight reduction and miniaturization of the inertial navigation system.				
	FY08	FY09	FY10	FY11
Combat Assault Rifle	.679	1.832	.831	
RDT&E Articles Quantity				
FY08 Supported additional operational testing and field user assessment. FY09 Complete development of the sniper support rifle and commence development of enhanced grenade launcher module fire control unit.				

Exhibit R-2a, RDT&E Project Justification		Date: MAY 2009
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Conduct user assessment, test and evaluation of the sniper support rifle.										
FY10 Completes development of the combat assault rifle’s common upper receiver, and begins development of 40mm programmable ammunition for the fire control unit.										
	FY08	FY09	FY10	FY11						
Personal Equipment Advanced Requirement	1.146									
RDT&E Articles Quantity										
FY08 Evaluated modular integrated communication helmet headsets and environmental protection for extremities. Conducted validation and verification testing of existing body armor against ballistic threats, both foreign and domestic.										
	FY08	FY09	FY10	FY11						
Tactical Combat Casualty Care Equipment Kit	.099									
RDT&E Articles Quantity										
FY08 Initiated evaluation and qualification of casualty evacuation kits.										
	FY08	FY09	FY10	FY11						
Weapons Shot Counter		1.363								
FY09 This is a Congressional add to develop a device to track rounds fired to establish reliability and maintainability data on weapons life.										
	FY08	FY09	FY10	FY11						
Multi-User Panoramic Synthetic Vision System	2.339									
RDT&E Articles Quantity										
FY08 This was a Congressional add to develop technology and integrated visual augmentation systems and sensors on ground vehicles.										
C. Other Program Funding Summary:										
	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY12</u>	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>	To <u>Complete</u>	Total <u>Cost</u>
PROC, Small Arms and Weapons	198.581	23.420	38.173						Cont.	Cont.
PROC, SOF Soldier Protection and Survival Systems		29.476	26.812						Cont.	Cont.
PROC, SOF Visual Augmentation Lasers, and Sensor Systems		25.099	32.724						Cont.	Cont.

Exhibit R-2a, RDT&E Project Justification		Date: MAY 2009
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FY08 PROC funding for SOF Soldier Protection and Survival Systems and SOF Visual Augmentation Lasers and Sensor Systems are included as part of the FY 08 PROC, Small Arms and Weapons.

D. Acquisition Strategy.

- **Sniper Weapon Systems.** Develops, tests and evaluates highly accurate, long-range weapon systems to enable the SOF operator to engage enemy and materiel targets utilizing pre-planned product improvement, and incremental development based on technology advances.
- **Combat Assault Rifle.** This program develops, tests and evaluates the next generation assault weapon system(s) and sniper support weapons to meet the requirements specific to SOF missions, utilizing an incremental approach. Pre-planned product improvements and advances in technology are the basis for each increment.
- **Weapons Accessories.** Develops, tests and evaluates accessories to optimize the effectiveness of all SOF weapons in order to increase their operational effectiveness through improved target recognition, acquisition and hit capability during day and night from close quarters to maximum effective range of each weapon. The program incrementally develops new capabilities as block upgrades, which are first developed and tested, and then fielded to the full spectrum of SOF operators. Developments leverage technology advances that enable increased effectiveness, reduction of size/weight, and the integration of capabilities into singular items to reduce the signature of, and combat load on, the SOF operator.
- **Weapon Shot Counter.** Develops, tests and evaluates devices that enable the capture of rounds fired through various weapon systems. This data is then used to develop maintenance schedules and activities in order to increase combat readiness.

Exhibit R-3 RDT&E Project Cost Analysis						DATE: MAY 2009					
APPROPRIATION / BUDGET ACTIVITY				SOF Weapons Systems/PE1160477BB							
RDT&E DEFENSE-WIDE / 7				Weapons Systems Advance Development/S375							
Actual or Budget Value (\$ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY09	Award Date FY09	Budget Cost FY10	Award Date FY10	Budget Cost FY11	Award Date FY11	To Complete	Total Program
Product Development											
Weapons Accessories											
Integration	ALLOT	NSWC-Crane, Crane. IN	0.499	0.204	Jan-09	0.214	Jan-10			Cont.	Cont.
Systems Engineering	ALLOT	NSWC-Crane, Crane. IN		0.057	Jan-09	0.036	Jan-10			Cont.	Cont.
Combat Assault Rifle											
Integration	ALLOT	NSWC-Crane, Crane. IN	0.580	1.832	Jun-09	0.831	Jan-10				3.243
Weapons Shot Counter											
Integration	ALLOT	NSWC-Crane, Crane. IN		1.363	Sep-09						1.363
Subtotal Product Development			1.079	3.456		1.081				Cont.	Cont.
Remarks:											
Support Costs											
Subtotal Support Costs											
Remarks:											
Test and Evaluation											
Sniper Weapons Systems	ALLOT	NSWC-Crane, Crane. IN	0.487	0.496	Mar-09						0.984
Subtotal Test and Evaluation			0.487	0.496							0.984
Remarks:											
Management Services											
Subtotal Management											
Remarks:											
Prior Years			14.871								
Total Cost			16.437	3.952		1.081				Cont.	Cont.
Remarks:											

Exhibit R-4, RDT&E Program Schedule Profile																	Date: MAY 2009																			
Appropriation/Budget Activity									Program Element Number and Name																Project Number and Name											
RDT&E/7									PE1160477BB/Special Operations Forces Weapons Systems																Project S375/Weapons Systems Advanced Development											
Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Sniper Weapon Systems																																				
Next Generation Rifle-Medium P3I																																				
Next Generation Rifle-Medium Development																																				
Next Generation Rifle-Heavy Development																																				
Weapons Accessories																																				
Clip-on Night Vision Device P3I																																				
Muzzle Break and Suppressor P3I																																				
Visible Bright Light Illuminator P3I																																				
Binocular/Monocular Systems (Moved to PE 1160479BB, Project S395)																																				
Prototype Development																																				
Laser Targeting Device (Moved to PE 1160479BB, Project S395)																																				
Inertial Navigational System Minaturization, P3I																																				
Combat Assault Rifle-Light																																				
Enhanced Grenade Launcher Module Development																																				
Sniper Support Rifle System Development																																				
Common Upper Receiver Development																																				
Personal Equipment Advanced Requirements (Moved to PE 1164079BB, Project S395)																																				
Body Armor																																				
--Foreign Ammo and Armor Exploitation																																				
--Shatter Gap Analysis																																				

Exhibit R-4, RDT&E Program Schedule Profile															Date: MAY 2009																	
Appropriation/Budget Activity									Program Element Number and Name																Project Number and Name							
RDT&E/7									PE1160477BB/Special Operations Forces Weapons Systems																Project S375/Weapons Systems Advanced Development							
Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
--Body Armor Threat Validation				▲																												
--Next Generation Plate Evaluation				▲																												
Helmet Communication																																
--Technical Evaluation				▲																												
Environmental Protection																																
--New Materiel Evaluation				▲																												
Tactical Combat Casualty Care Equipment Kit (Moved to PE 1160479BB, Project S395)																																
Casualty Evacuation Kits																																
--Concept Development				▲				△																								
Multi-User Panoramic Synthetic Vision System-Congressional add																																
Engineering Support				▲				△																								
Weapons Shot Counter - Congressional add																																
--Hardware Development											△				△																	
--Developmental Testing															△				△													

Exhibit R-4a, RDT&E Program Schedule Detail					Date: MAY 2009				
<u>Appropriation/Budget Activity</u>	<u>Program Element Number and Name</u>			<u>Project Number and Name</u>					
RDT&E/7	PE1160404BB/Special Operations Tactical Systems Development (FY06-08)/PE1160477BB/SOF Weapon Systems (FY09-13)			Project 375/Weapons Systems Advanced Development					
<u>Schedule Profile</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	
Sniper Weapon Systems									
Next Generation Rifle-Medium P3I	2Q-4Q								
Next Generation Rifle-Medium Development		3-4Q	1-2Q						
Next Generation Rifle-Heavy		3-4Q	1-2Q						
Weapons Accessories									
Clip-on Night Vision Device P3I	1Q-4Q	2Q-4Q	2Q-4Q						
Muzzle Break and Suppressors P3I	1Q-4Q	2Q-4Q	2Q-4Q						
Visible Bright Light Illuminator Systems Engineering	1Q-4Q	2Q-4Q	2Q-4Q						
Binocular/Monocular Systems									
Prototype Development	4Q								
Laser Target Device									
Inertial Navigation System (INS) Miniaturization, P3I	1Q-4Q								
Combat Assault Rifle - Light									
Enhanced Grenade Launcher Module Development		3Q-4Q	3Q-4Q						
Sniper Support Rifle System Development		3Q-4Q	3Q-4Q						
Common Upper Receiver Development		3Q-4Q	3Q-4Q						
Personal Equipment Advanced Requirements									
Body Armor									
Foreign Ammo and Armor Exploitation	3Q-4Q								
Shatter Gap Analysis	3Q-4Q								
Body Armor Threat Validation	4Q								
Next Generation Plate Evaluation	4Q								
Helmet Communication									
Technical Evaluation	4Q								
Environmental Protection									
New Materiel Evaluation	4Q								
Tactical Combat Casualty Care Equipment Kit									
Casualty Evacuation Kits									
Concept Development	4Q-2Q	1Q-2Q							

